History of the Sleeve Gastrectomy

Ranjan Sudan, MD, FASMBS,
Sleeve is part of BPD/DS

- BPD/DS is a modification of the Scopinaro BPD first described in 1979
- First BPD/DS performed in 1988 by Hess
- First published by Marceau in 1993
Role of Pylorus Preservation

- Longmire and Traverso
  - Pylorus preserving Whipple (1978)
- Critchlow
  - Pylorus preservation for patients with duodenal diverticula (1985)
- DeMeester
  - dog experiments (1987)
  - Reduced incidence of marginal ulceration
Role of Pylorus Preservation

- Reduced marginal ulceration
- Increased sense of satiety
- Reduced dumping symptoms
Sleeve Gastrectomy in the High-Risk Patient

Nahid Hamoui, MD; Gary J. Anthone, MD; Howard S. Kaufman, MD; Peter F. Crookes, MD

Department of Surgery, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA
Laparoscopic Sleeve Operation

- Ren described first laparoscopic series of BPD/DS in 2000
- Sudan performed first robotic BPD/DS in 2000
- Kim reported high mortality in patients BMI > 60 kg/m²
- Concept of staging laparoscopically was developed
Sleeve Gastrectomy

- Tubular stomach
- Stomach capacity reduced from 250cc (60 French bougie) to ≈ 100 mL (34 French Bougie)
- Many patients were not returning for second stage and concept of Sleeve as primary bariatric operation was born
Laparoscopic sleeve gastrectomy as an initial weight-loss procedure for high-risk patients with morbid obesity

D. Cottam,¹ F. G. Qureshi,¹ S. G Mattar,² S. Sharma,² S. Holover,² G. Bonomani,² P. Schauer²

¹ Department of Surgery, University of Pittsburgh Medical Centre, Pittsburgh, PA, and Department of Surgery, Veterans Hospital, Pittsburgh, PA, USA
² Department of Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

Received: 7 March 2005/Accepted: 7 September 2005/Online publication:

* P < 0.05

![Graph showing comorbid and ASA comparisons before and after LSG with statistical significance marked with * P < 0.05]
Physiologic basis

- Role of
  - Ghrelin
  - Peptide YY
Rapid communication

Updated Position Statement on Sleeve Gastrectomy as a Bariatric Procedure

Clinical Issues Committee of the American Society for Metabolic and Bariatric Surgery

American Society for Metabolic and Bariatric Surgery, Gainesville, Florida
Received November 8, 2009; accepted November 9, 2009
Incidence of Sleeve Gastrectomy

- Gaining popularity worldwide
- In Europe, succeeding adjustable band as restrictive operation of choice.
- Emerging 5 year outcomes that appear to be superior to adjustable band.
Indications

- Anyone in whom malabsorption is undesirable or contraindicated
- Patients who do not want to deal with the device related issues of the adjustable band or in whom the band is contraindicated
- High risk candidates for staging purposes
Current Indications for LSG

- **Primary**
  - Transplant candidate
  - Continued NSAID/Steroid use
  - Crohn’s Disease
  - Multiple bowel resections
  - Average risk patient as stand-alone procedure

- **Staged Approach**
  - Severe cardiac/pulmonary disease
  - High anesthetic risk
  - Super super-obese
  - Advanced age, multiple comorbidities
Expected Weight Loss

- %EWL is about 50% at 1 year.

- Results for Diabetes are intermediate between Band and Bypass (Hutter 2011)
Summary

- SG is gaining worldwide popularity.
- Patient access remains a problem.
- Indications and Technique are still in evolution.
- %EWL is about 50% at 1 year.
- Weight loss outcomes appear to be superior to adjustable gastric band.
Summary

- Ghrelin levels fall significantly after sleeve gastrectomy.
- Accelerated nutrient delivery to ileum stimulates GLP-1 secretion thereby modulating glucohomeostasis.
- CRP levels drop after SG.
- Fatty infiltration of liver decreases after SG.